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REMARKS

The Application has been carefully reviewed in light of the Office Action mailed April 11, 2007. At the time of this Office Action, Claims 1-26 were pending in the Application and Claims 1-26 were rejected. The following actions were taken or matters raised: (I) The Information Disclosure Statement filed by the Applicants was acknowledged by the Office, (II) Claims 1, 6, 17 and 23 were rejected under 35 U.S.C. § 102(b) as being anticipated by Xie et al ("Cell Discarding Policies Supporting Multiple Delay and Loss Requirements in ATM Networks"); (III) Claims 8-12 and 15 were rejected under 35 U.S.C. § 102(b) as being anticipated by Onvural et al (U.S. Pub 2002/0150115 A1); (IV) Claims 2, 5, 18, 21, 24 and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Xie et al ("Cell Discarding Policies Supporting Multiple Delay and Loss Requirements in ATM Networks) in view of Onvural et al (U.S. Pub 2002/0150115 A1); (V) 3, 19 and 26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Xie et al ("Cell Discarding Policies Supporting Multiple Delay and Loss Requirements in ATM Networks) in view of Onvural et al (U.S. Pub 2002/0150115 A1), Henderson et al (U.S. Pub 2003/0154328) and Aukia et al (U.S. Pat 6,594,268); (VI) Claims 7 and 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Xie et al ("Cell Discarding Policies Supporting Multiple Delay and Loss Requirements in ATM Networks) in view of Huang et al (U.S. Pat 6,546,013); (VII) Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over

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Onvural et al (U.S. Pub 2002/0150115 A1) in view of Henderson et al (U.S. Pub 2003/0154328) and Aukia et al (U.S. Pat 6,594,268); (VIII) Claim 14 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Onvural et al (U.S. Pub 2002/0150115 A1) in view of Henderson et al (U.S. Pub 2003/0154328) and Guerin et al (U.S. Pub 2003/0072270); (IX) Claim 16 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Onvural et al (U.S. Pub 2002/0150115 A1) in view of Huang et al (U.S. Pat 6,546,013); and Claims 4 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Xie et al ("Cell Discarding Policies Supporting Multiple Delay and Loss Requirements in ATM Networks) in view of Onvural et al (U.S. Pub 2002/0150115 A1) and further in view of Henderson et al (U.S. Pub 2003/0154328) as applied to Claims 2 and 18, and in further view of Guerin et al (U.S. Pub 2003/0072270 A1). In order to advance prosecution of this case by overcoming the rejections asserted by the Office, Claims 1-3, 6, 8-11, 13, 17-19 and 23-26 have been amended, Claim 12 has been canceled, and remarks addressing such rejection have been presented herein. The Applicants respectfully request reconsideration and favorable action in this case.

Rejection Under 102(b) - Xie

Claims 1, 6, 17 and 23 were rejected under 35 U.S.C. § 102(b) as being anticipated by Xie et al ("Cell Discarding Policies Supporting Multiple Delay and Loss Requirements in ATM Networks). The Applicants assert that, in view of amended independent Claims 1, 17 and 23, the present invention as recited in independent Claims 1, 17 and 23, and all other claims dependent thereon, is clearly distinguished from Xie and provides advantageous, useful and non-obvious functionality in view of Xie. Accordingly, the Applicants submit that the rejections under 35 U.S.C. § 102(b) applied to Claims 1, 6, 17 and 23 as being anticipated by

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Xie et al is overcome and respectfully requests the Office to withdraw the rejections asserted against Claims 1, 6, 17 and 23 under 35 U.S.C. § 102(b) as being anticipated by Xie.

More specifically, Claims 1 and 17 have been amended to characterize the invention with greater specificity in view of the Xie. Claims 1 and 17 have each been amended to recite: determining a maximum per-hop queuing delay allowed for at least two high-priority packets in a queue in the switch, determining which one of the at least two high-priority packets has a smallest node exit delay requirement, wherein a node exit delay requirement for a designated high-priority packet is the sum of the maximum per-hop queuing delay allowed for the designated high-priority packet and a time of entry at the switch for the designated high-priority packet; and scheduling the one of the at least two high-priority packets determined to have the smallest node exit delay requirement before the remaining ones of the at least two high-priority packets. The functionality resulting from the recitations of Claims 1 and 17 provides for "relative prioritization" between high-priority packets. This relative prioritization pertains to the number of hops such high priority packets will traverse and hence the delay that a given high priority packet will incur. For instance, packets that are destined for nodes that are many hops away will be given priority in transporting them through the high-priority input queue. Accordingly, implementation in accordance with the present invention can enable equalization of the delay among high priority packets going to different destinations and therefore will enable high priority packets that need to travel many hops to meet their delay and jitter specifications.

Xie does not disclose or suggest: 1.) determining a maximum per-hop queuing delay allowed for at least two high-priority packets in a queue in the switch, 2.) determining which one of

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the at least two high-priority packets has a smallest node exit delay requirement, wherein a node exit delay requirement for a designated high-priority packet is the sum of the maximum per-hop queuing delay allowed for the designated high-priority packet and a time of entry at the switch for the designated high-priority packet, or 3.) scheduling the one of the at least two high-priority packets determined to have the smallest node exit delay requirement before the remaining ones of the at least two high-priority packets. As Xie states in the passages cited by the Office, scheduling of transmission for a packet from a node is directly based on the sum of a maximum queuing delay allowed for the node (as opposed to a maximum allowed per-hop queuing delay) and the time of arrival for the packet. As Xie also states in the passages cited by the Office, this scheduling approach will result in a First-Come-First Serve approach for a node where all traffic flows have the same delay requirement (i.e., the same maximum allowed queuing delay, as in an ATM switch). Accordingly, a skilled person will appreciate that the functionality as provided by the present invention as claimed cannot be provided and is not intended to be provided by implementations of the disclosures by Xie.

In view of the amendments made to independent Claims 1, 17 and 23 and the associated remarks, Claims 1, 17 and 23, and all claims dependent thereon, are patentable under 35 U.S.C. 102(b) over Xie because they recite features, physical structure and/or function not present in, configured for being provided by, or intended to be provided by system or methods in accordance with the disclosures of Xie, and therefore distinguish physically over Xie. Accordingly, the Applicants submit that the rejection under 35 U.S.C. § 102(b) applied to Claims 1, 6, 17 and 23 as being anticipated by Xie is overcome and respectfully requests the Office to withdraw the rejection asserted against Claims 1, 6, 17 and 23 under 35 U.S.C. § 102(b) as being anticipated by Xie.

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Rejection Under 102(b) - Onvural

Claims 8-12 and 15 were rejected under 35 U.S.C. § 102(b) as being anticipated by Onvural et al (U.S. Pub 2002/0150115 A1). The Applicants assert that, in view of amended independent Claim 8, the present invention as recited in independent Claim 8, and all other claims dependent thereon, is clearly distinguished from Onvural provides advantageous, useful and non-obvious functionality in view of Onvural. Accordingly, the Applicants submit that the rejections under 35 U.S.C. § 102(b) applied to Claims 8-12 and 15 as being anticipated by Onvural et al is overcome and respectfully requests the Office to withdraw the rejections asserted against Claims 8-12 and 15 under 35 U.S.C. § 102(b) as being anticipated by Onvural.

More specifically, Claim 8 has been amended to characterize the invention with greater specificity in view of the Onvural. Claim 8 has been amended to recite: creating a first table that lists, for each high-priority packet that has entered the switch, a position of the high-priority packet in a queue of the switch, a time the high-priority packet entered the queue, and an intended destination of the high-priority packet; creating a second table for storing a maximum allowed per-hop queuing delay for each of several possible intended destinations; and using the first and second tables to determine a node exit delay requirement for each of the high-priority packets in the queue of the switch, wherein a node exit delay requirement for a designated high-priority packet is the sum of the maximum allowed per-hop queuing delay for the designated high-priority packet and a time of entry at the switch for the designated high-priority packet. The functionality resulting from the recitations of Claim 8 provides for "relative prioritization" between high-priority packets. This relative

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prioritization pertains to the number of hops such high priority packets will traverse and hence the delay that a given high priority packet will incur. For instance, packets that are destined for nodes that are many hops away will be given priority in transporting them through the high-priority input queue. Accordingly, implementation in accordance with the present invention can enable equalization of the delay among high priority packets going to different destinations and therefore will enable high priority packets that need to travel many hops to meet their delay and jitter specifications.

Onvural does not disclose or suggest: 1.) creating a second table for storing a maximum allowed per-hop queuing delay for each of several possible intended destinations; or 2.) using the first and second tables to determine a node exit delay requirement for each of the high-priority packets in the queue of the switch, wherein a node exit delay requirement for a designated high-priority packet is the sum of the maximum allowed per-hop queuing delay for the designated high-priority packet and a time of entry at the switch for the designated high-priority packet. As Onvural states in the passages cited by the Office, scheduling of transmission for a packet from a node is directly based on the sum of a maximum queuing delay allowed for the node (as opposed to a maximum allowed per-hop queuing delay) and the time of arrival for the packet. As Onvural also states in the passages cited by the Office, the maximum delay is the maximum delay for the traffic stream, which is different than the maximum allowed per-hop queuing delay. Accordingly, a skilled person will appreciate that the functionality as provided by the present invention as claimed cannot be provided and is not intended to be provided by implementations of the disclosures by Onvural.

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In view of the amendments made to independent Claim 8 and the associated remarks, Claim 8, and all claims dependent thereon, are patentable under 35 U.S.C. 102(b) over Onvural because they recite features, physical structure and/or function not present in, configured for being provided by, or intended to be provided by system or methods in accordance with the disclosures of Onvural, and therefore distinguish physically over Onvural. Accordingly, the Applicants submit that the rejection under 35 U.S.C. § 102(b) applied to Claims 8-12 and 15 as being anticipated by Onvural is overcome and respectfully requests the Office to withdraw the rejection asserted against Claims 8-12 and 15 under 35 U.S.C. § 102(b) as being anticipated by Onvural.

Rejection Under 103(a) – Xie in view of Onvural

The Office has rejected Claims 2, 5, 18, 21, 24 and 25 under 35 U.S.C. § 103(a) as being unpatentable over Xie in view of Onvural. Amended independent Claims 1, 17 and 23, and all claims dependent thereon, include novel physical features that provide new and advantageous results in view of Xie and/or Onvural, making such claims non-obvious and, thus, patentable over Xie and/or Onvural. In view of these amendments and in view of the remarks presented above, the Applicants submit that the rejection under 35 U.S.C. § 103(a) applied to Claims 2, 5, 18, 21, 24 and 25 is overcome and respectfully requests the Office to withdraw the rejection of Claims 2, 5, 18, 21, 24 and 25 under 35 U.S.C. § 103(a) as being unpatentable over Xie and/or Onvural.

Rejection Under 103(a) – Xie in view of Onvural, Henderson and Aukia

The Office has rejected Claims 3, 19 and 26 under 35 U.S.C. § 103(a) as being unpatentable over under Xie in view of Onvural, Henderson and Aukia. Amended independent Claims 1,

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17 and 23, and all claims dependent thereon, include novel physical features that provide new and advantageous results in view of Xie, Onvural, Henderson and/or Aukia, making such claims non-obvious and, thus, patentable over Xie, Onvural, Henderson and/or Aukia. In view of these amendments and in view of the remarks presented above, the Applicants submit that the rejection under 35 U.S.C. § 103(a) applied to Claims 3, 19 and 26 is overcome and respectfully requests the Office to withdraw the rejection of Claims 3, 19 and 26 under 35 U.S.C. § 103(a) as being unpatentable over Xie, Onvural, Henderson and/or Aukia.

Rejection Under 103(a) – Xie in view of Huang

The Office has rejected Claims 7 and 22 under 35 U.S.C. § 103(a) as being unpatentable over under Xie in view of Huang. Amended independent Claims 1 and 17, and all claims dependent thereon, include novel physical features that provide new and advantageous results in view of Xie and/or Huang, making such claims non-obvious and, thus, patentable over Xie and/or Huang. In view of these amendments and in view of the remarks presented above, the Applicants submit that the rejection under 35 U.S.C. § 103(a) applied to Claims 7 and 22 is overcome and respectfully requests the Office to withdraw the rejection of Claims 7 and 22 under 35 U.S.C. § 103(a) as being unpatentable over Xie and/or Huang.

Rejection Under 103(a) – Onvural, Henderson and Aukia

The Office has rejected Claim 13 under 35 U.S.C. § 103(a) as being unpatentable over under Onvural in view of Henderson and Aukia. Amended independent Claim 8, and all claims dependent thereon, include novel physical features that provide new and advantageous results in view of Onvural, Henderson and/or Aukia, making such claims non-obvious and, thus, patentable over Onvural, Henderson and/or Aukia. In view of these amendments and in view

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of the remarks presented above, the Applicants submit that the rejection under 35 U.S.C. § 103(a) applied to Claim 13 is overcome and respectfully requests the Office to withdraw the rejection of Claim 13 under 35 U.S.C. § 103(a) as being unpatentable over Onvural, Henderson and/or Aukia.

Rejection Under 103(a) – Onvural, Henderson and Guerin

The Office has rejected Claim 14 under 35 U.S.C. § 103(a) as being unpatentable over under Onvural in view of Henderson and Guerin. Amended independent Claim 8, and all claims dependent thereon, include novel physical features that provide new and advantageous results in view of Onvural, Henderson and/or Guerin, making such claims non-obvious and, thus, patentable over Onvural, Henderson and/or Guerin. In view of these amendments and in view of the remarks presented above, the Applicants submit that the rejection under 35 U.S.C. § 103(a) applied to Claim 14 is overcome and respectfully requests the Office to withdraw the rejection of Claim 14 under 35 U.S.C. § 103(a) as being unpatentable over Onvural, Henderson and/or Guerin.

Rejection Under 103(a) – Onvural and Huang

The Office has rejected Claim 16 under 35 U.S.C. § 103(a) as being unpatentable over under Onvural in view of Huang. Amended independent Claim 8, and all claims dependent thereon, include novel physical features that provide new and advantageous results in view of Onvural and/or Huang, making such claims non-obvious and, thus, patentable over Onvural and/or Huang. In view of these amendments and in view of the remarks presented above, the Applicants submit that the rejection under 35 U.S.C. § 103(a) applied to Claim 16 is

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overcome and respectfully requests the Office to withdraw the rejection of Claim 16 under 35 U.S.C. § 103(a) as being unpatentable over Onvural and/or Huang.

Rejection Under 103(a) – Xie, Onvural, Henderson and Guerin

The Office has rejected Claims 4 and 20 under 35 U.S.C. § 103(a) as being unpatentable over under Xie in view of Onvural, Henderson and Guerin. Amended independent Claims 8 and 17, and all claims dependent thereon, include novel physical features that provide new and advantageous results in view of Xie, Onvural, Henderson and/or Guerin, making such claims non-obvious and, thus, patentable over Xie, Onvural, Henderson and/or Guerin. In view of these amendments and in view of the remarks presented above, the Applicants submit that the rejection under 35 U.S.C. § 103(a) applied to Claims 4 and 20 is overcome and respectfully requests the Office to withdraw the rejection of Claims 4 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Xie, Onvural, Henderson and/or Guerin.

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CONCLUSIONS

The Applicants have made an earnest attempt to place this case in condition for allowance. For the foregoing reasons, and for reasons clearly apparent, the Applicants respectfully request full allowance of all pending claims. If there are any matters that can be discussed by telephone to further the prosecution of the Application, the Applicants invite the Examiner to contact the undersigned at 512-306-8533 at the Examiner's convenience.

Respectfully submitted,

By: Raymond M Galasso
Reg. No. 37,832

Galasso & Associates, LP
P.O. Box 26503
Austin, Texas 78755-0503
Telephone: (512) 306-8533
Facsimile: (512) 306-8559

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